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DUNDEE NURSERY.



CATALOGUE OF

EVERGREENS, EUROPEAN LARCH, ETC.

No Wild or Imported Evergreens
offered at any price.



My Trees are all Nursery Grown.

FOR THE SPRING OF 1893.
1894

CULTIVATED AND FOR SALE BY

D. HILL, EVERGREEN SPECIALIST,
DUNDEE, KANE CO., ILL.

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Fig. 1.—Evergreen with Good Roots.

Fig. 1

Represents a Tree with

GOOD ROOTS,

*A Norway Spruce 3 feet
in height.*

*The best is always the
cheapest.*

*Root Cultivation is the
secret of my success as
an Evergreen Specialist.
.*

Fig. 2

Represents a Tree with

POOR ROOTS.

*Such a tree is worthless
and high at any
price.*



Fig. 2.—Evergreen with Poor Roots.

TERMS AND CONDITIONS.

In presenting my Price List for the Spring of 1893, I would thank my customers who have so liberally patronized me the past season, and by honest dealing and strict attention to business, I hope to enjoy a continuance of the same.

Terms of payments must invariably be cash, or satisfactory note or draft. Orders to be sent C. O. D. must be accompanied by one-fourth cash. Money can be sent as follows, at my risk: Draft on Chicago, Post Office Order, Registered Letter, or Express. Do not send money in an open letter.

Plants furnished as follows: 50 at 100 rate—500 at 1,000 rates, etc.

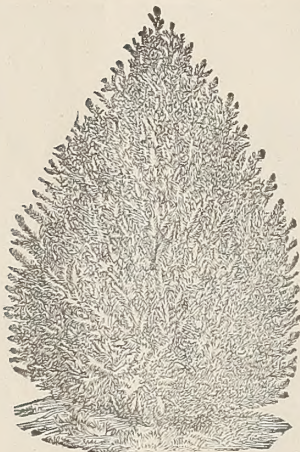
Special attention given to packing, for which will only be charged the cost of material used.

All goods delivered at freight depot or express office free of charge, after which they will be at the risk of the purchaser.

Be particular in all cases to put the order in distinct, definite form. Let it be on a page or sheet separate from the body of the letter, with name, post office, county and state plainly written, and give full directions as to route and manner in which stock is to be shipped, freight or express.

On receiving trees from a nursery, the boxes or packages should be immediately unpacked and the roots dipped in a puddle made of rich, mellow soil, about the thickness of paint ready for use, and be careful not to let the roots get dry before planting. Place them in a cool, shady place until ready to plant, and if not immediately ready, heel them into the ground by placing the roots in a trench covering well up with mellow soil, and well firming with the foot; if the ground is dry, give some water at planting. Set the trees a little deeper than they stood in the nursery, treading the earth firmly about the roots when planting. This is one of the essentials of success.

EVERGREENS.



SIBERIAN ARBOR VITAE.

[See Page 4.]

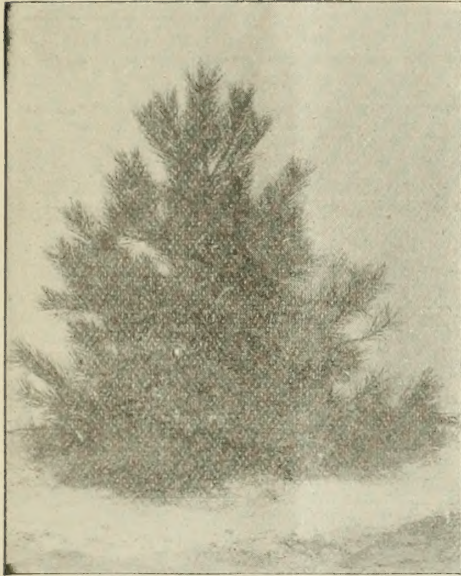
These are a class of indispensable trees and shrubs for parks, private and public grounds, and possessing varied characteristics of habit and growth, form and coloring of foliage, and adapted to a variety of soils.

Several of this class are exceedingly useful for reclaiming waste land, and many more are of the highest value for forming belts for landscape effect, and also for shelter, to allow the use of more tender kinds of trees and plants in localities which otherwise would be too much exposed to climate, sun and wind.

All are of high ornamental merit, and together present the greatest diversity of foliage and varied forms, adapting them for use in lawn culture—singly, as specimen plants, or in groups, to show by comparison, and thus to heighten their varied distinctions.

SOIL.—Conifers will grow in all soils, except those of a wet nature, and even in such there are a few that will thrive. The Firs being of a shallow-rooted nature will make vigorous growth in many localities where the good soil may be very thin. Several of the Pines and Firs will grow

well on the bleakest side hills, exposed to the most trying gales, and on the coast they are found especially valuable to form belts for the protection of animal and vegetable life. In planting the choice Conifers for ornamental effect, it is well to have the soil of good quality, and the same planting directions apply to these as to other trees, but no fresh manure should be used directly on the roots, and its most advisable use is as a mulch, placed on top of the ground in the fall, and raked away in early summer, after the spring rains.



AUSTRIAN PINE, OR BLACK PINE.
[See Page 4.]

popular idea that Evergreens should be planted in June only is false, and the cause of many failures. Practical experience proves that this is not always the best time, but that they may be safely moved in early spring or fall. We find the best time for moving Conifers in spring is from April 20th to June 1st, and in fall from August 1st to September 15th.

The cuts of Evergreens shown in these pages were all taken from trees in my nursery.

AMERICAN ARBOR VITAE.
(*Thuja Occidentalis*.)

A handsome tree of regular and symmetrical habit. Growth thick and bushy; one of our best and most useful evergreens. Excellent for screens and hedges.

HOVEY'S GOLDEN ARBORVITAE
Resembling the old golden in color.
A new dwarf sort; fine.

PYRAMIDAL ARBORVITAE.

A superb new and hardy sort, of very compact habit, much better than the Irish Juniper, and growing in a perfect column; rare and beautiful. Largely planted in cemeteries, owing to the small amount of space it occupies. This perhaps is the most valuable Arbor Vitae in cultivation.

PRUNING.—Except for hedges the best time to prune Conifers is previous to their growing season, and careful use of the pruning knife will often revive a tree which otherwise may be on the decline.

ROOTS.—It is very important that Conifers should have an abundance of fine fibrous roots when planted, and this can only be obtained by frequent transplanting of the stock at the nursery.

We exercise the greatest care to have our trees frequently transplanted or root pruned, to insure such roots.

Allow the least possible exposure to the roots of Conifers in planting, and see that the trees do not wilt.

PRUNING HEDGES.—In this case it is desirable to prune during the growing season, that the growth may be stunted and the growing out of side-shoots to thicken, encouraged.

SHIPPING SEASON.—The



SCOTCH PINE. [See page 4.]

SIBERIAN ARBOR VITÆ.

See page 2.

Tree is very hardy, of compact growth and pyramidal form. It keeps its color well through the winter; handsome lawn tree.

AUSTRIAN PINE, or BLACK PINE, (*P. Austriaca* syn. *Nigricans*.) See pg 3.

A remarkably robust, hardy, spreading tree; leaves long, stiff and dark green; rapid grower. Valuable for this country.

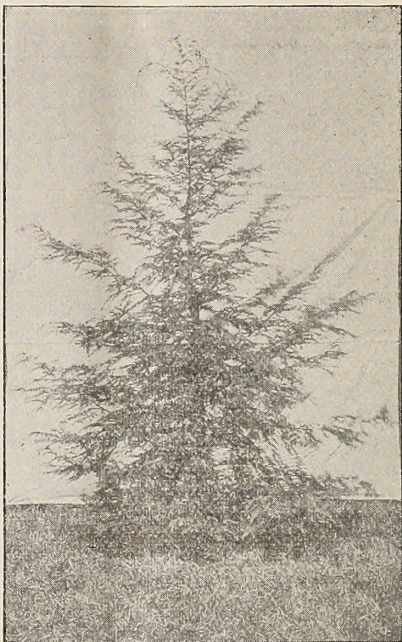
SCOTCH PINE.(*P. Sylvestris*.) See page 3.

A rapid growing, hardy variety, with stout erect shoots, and silvery green foliage. Valuable for shelter, and makes a good lawn tree, and being one of the hardiest of the evergreen family, it readily adapts itself to the trying climate of Minnesota, the Dakotas and Montana. It also thrives well on the dry plains of Kansas.

HEMLOCK SPRUCE.

(*Abies Canadensis*, sometimes called Weeping Spruce.)

The cut on this page shows the trees just as they grow in nursery rows. This is a well known evergreen of high northern latitudes. It is one of the most graceful Spruces, with a light and spreading spray, frequently branches

**HEMLOCK SPRUCE.**

almost to the ground. It is a beauty for the lawn and makes a highly ornamental hedge.

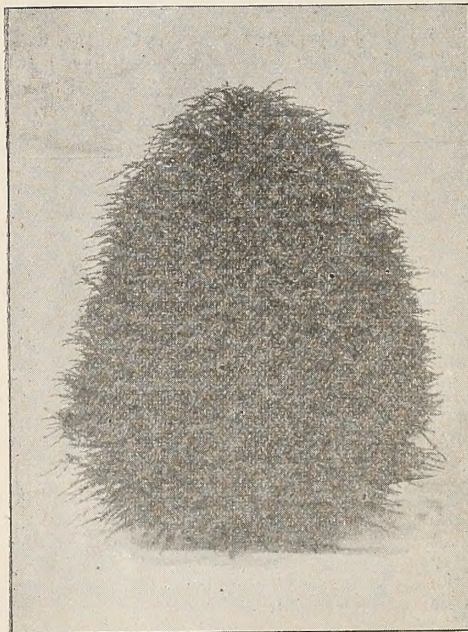
SHEARED HEMLOCK.

Same age as above cut, but sheared every season in June.

THE PICEA PUNGENS.

This is King of the Spruces, clothed in royal robes of silver and Sapphire, a very Kohinoor among the gems of the Rockies. It is a child of the storm king, growing at an altitude of from 8,000 to 10,000 feet above the level of the sea. It is generally found even there in deep gorges or on the north of the ranges. We would naturally suppose that it could not endure a sudden change or thrive in a hot climate. There are fine specimens growing in Washington also in North Carolina.

The question arises, while the tree endures such a diversity of soil and climate, why is it never found on the lower altitudes or among the foot hills? The answer is, it could not possibly grow there. The Douglas, the Ponderosa, and Concolor have large

**SHEARED HEMLOCK.**

seeds and send out a strong plant and therefore they are found lower down. Pungens seed is small, about 110,000 to the pound. In the higher altitudes are frequent shower and often moss in the woods, and the ground is seldom dry. It is not hot enough to kill the plants, and so on the north side of the high altitudes Nature has provided for their propagation.

The cone of the Pungens is about one-half the size of the Norway. The needles are short and sharp—pungent—hence the name. They are polished like glass.

DOUGLAS SPRUCE.
(*Seudotsuga Douglasii*.)

This is emphatically the tree for the million. While on a visit to the eastern nurseries, I noted in almost every instance that it was the most rapid grower of all the conifers.

Sometimes the complaint is made that it grows too fast, and is not compact enough for the



PICEA PUNGENS. [See Page 4.]

lawn tree; yet on my grounds they seem to have the perfection of form. The foliage is soft and much resembles the Hemlock, hence the name (resembling the Hemlock). In the mountains it is a grand tree. It reaches from the Rockies to the Pacific slope and our chief of Forestry, B. E. Fernow, tells us that he never on earth saw such a burden of lumber to the acre as that produced by this tree in the West. We are to mind that seeds from the conifers gathered on the Pacific slope are tender, while those gathered in Colorado produce hardy trees, which endure both drought and cold.

The lumber of this tree is very strong, and is invaluable for timber, joists and scantlings, and makes good lumber for finishing, though like the Hemlock it is easily split. In color it is much like the Red Wood of the Pacific coast.

I want to call your attention to one feature of this tree. In the deep gorges and on the north side of the mountains, as you reach the high altitudes, you will find them of the deep blue type—literally sparkling with silver. Seen at a distance they are often taken for the pungens. These trees should be sought out and cultivated, for in addition to their rich coloring, they have more flexible grace in contrast with the rigid pungens.



DOUGLAS SPRUCE.

NORWAY SPRUCE.
(*Abies Excelsa*.)

A very popular variety from Europe. It has been more extensively planted in this country than any other evergreen. In fact, it is so well known as being the best evergreen for ornamental purposes, that it is only necessary to say, it is also the most valuable for wind-breaks, screens and hedges. Of this variety I have several millions.

AM. WHITE SPRUCE.
(*Picea Alba*.)

A pyramidal tree of dense growth, with light silvery green foliage. A more compact tree in all respects than the Norway Spruce. Fine for lawn planting or use near the sea shore; one of the best for general use.

BLACK HILLS SPRUCE.

This is the *Picea, Alba* or the White Spruce but with this difference, that while the Norway and the White and Black spruces of the north will not endure the winter droughts of the western plains, this tree seems well adapted for all the regions from which the others are excluded. Growing in a dry climate and often richly colored, it seems to meet the requirements of a vast field. While the air of the plains has but about 50° of moisture to 90° in the eastern states, it is necessary to have something which will endure the bright sun and drying winds of winter. We have not the experience with this tree we have with the Rocky Mountain conifers, yet having a few thousand growing, we have great faith in them for the West, and see no reason why they should not do well in the East also.



AM. WHITE SPRUCE.

BALSAM FIR.
(*P. Balsamea*.)

A well known popular tree; very handsome while young, assuming the upright or conical form; leaves dark green above, silvery beneath, retains its color throughout the severest winter; grows quite rapidly when established, desirable every way.



BALSAM FIR.



NORWAY SPRUCE.

THE CONCOLOR.

I take this description from an article in the Boston Congregationalist: "The tree with that bright foliage is the Concolor. Riding with a friend in Massachusetts last winter far off on a hill we saw row of evergreens. There, said I, is a tree from the Rockies, which proved to be true. As the name indicates, it is even colored, the same the year around. But you say: 'What a marvelous beauty this has—ermine and emerald blended. Such a sheen! a tree dressed in glory! What is it?' It is a robe of matchless beauty the great Horticulturalist has given these conifers, making them the most attractive of anything on earth. They are held in reserve



IRISH JUNIPER.

for these later days, when nature and art unite to make home and lawn and landscape so attractive to the eye of taste. Note the contrast of this rare color with the deep green of the pines. There are one or two of these trees on the princely estate of Mr. Hunnewell at Wellesly. They are true to their nature—some trees put on wonderful



WHITE PINE.

beauty while young; but these retain their attractiveness down to old age, and wear their brightness, as the Christian does his joy, to the very last.

But in order to see these trees in all their glory you should see them while bearing their cones. Here is a grove of them. All are dressed in their marvelous attire of silver and of green. On one tree the blossoms and cones are of a deep, rich purple. What a contrast to the other hues! But this other tree has blossoms and cones of lightest green—another contrast. The cones grow erect at the top of the tree. They are perfect in form, and about the size of an ear of sweet corn. As they mature in their perfect symmetry, these colors seem to deepen, and then from the cones that clear gum exudes; the sun shines, and it sparkles like crystals. Take this grove then, with the sun shining brightly upon it, with its green and silver, its purple and crystal, and it seems almost too beautiful for earth. From the small plantings of this tree at the east one has no conception of its coming symmetry and grace, its beauty of mingled tints; and yet at the East I note that these trees do as well as in their own habitat, and you will soon have



MOUNTAIN PINE.

these mountain treasures there, that will hold the stranger spell bound by their unique beauty. I have tried selecting seeds from the rarest specimens and find that among the thousands now coming up most of them fairly sparkle with silver."

WHITE PINE.

(P. Stobus.) See page 7.

It is the most ornamental of all our native pines. Foliage light, delicate silvery green. Flourishes in the poorest and driest soils; easily transplanted.

JUNIPEROUS CEDAR. See page 7.

IRISH JUNIPER. A very pretty little tree, forming a neat tapering column of deep green foliage, very hardy and desirable for planting on lawns or cemetery lots where larger evergreens are not admissible.

JUNIPER VIRGINIAN.

RED CEDAR. A well known American tree. It varies much in habit and color of foliage. It succeeds well on the plains of Nebraska and Kansas where other evergreens fail. It is very desirable for ornamental purposes; also for wind breaks, shelter belts and hedges.

DWARF MOUNTAIN PINE.

(Pinus Montana.) See page 7.

It is a beautiful little tree or bush, foliage very dense, and of a rich dark green; very valuable for ornamental purposes. It is perfectly hardy in the most exposed situations.

THE EUROPEAN LARCH.

Is the greatest timber tree in Europe, combining rapid growth with great durability, extreme hardiness, adaptability to any variety of soil not too wet, and remarkably free from disease. It is also very desirable as an ornamental tree; its conical shape, regular, delicate branches, and soft, light green leaves making a striking contrast to the different varieties of European and ornamental trees.

TO MY PATRONS.

The growing of Evergreens from seed is my specialty. While my prices will be found lower than most reliable establishments, I am quite confident my trees will be equal to the best and superior to most.

Millions of wild evergreens are being pulled up every year in our northern forests, such as the American Arbor Vitæ, Balsam Fir, White Pines, and the Swamp Spruces, which are sold by Nurserymen, some of whom describe them as being as good and even better than trees grown in the nursery. For the past six years I have been testing and experimenting with these wild evergreens, under the most favorable conditions and the best possible care and cultivation. Three per cent is the most we have been able to make live, and even those were only third-class trees, remaining spindling, stunted and sickly looking for years. These evergreens, together with the vast amount of imported evergreens which have been sold in this country the past two years, have had a tendency to discourage the planting of evergreens.

To those who have been so unfortunate in planting any of the above evergreens, try nursery grown trees, if only a few, and you will become convinced that evergreens can be as successfully transplanted as apple or any other tree.

MY REFERENCES.

By permission I refer my friends and patrons to the following firms: Hon. E. C. Hawley, Banker, Dundee, Ill. Albert Miller, P. M., Dundee, Ill. Express Agent, Dundee, Ill. Hon. H. B. Willis, Judge of Kane County Circuit Court, Elgin, Ill. Hon. David B. Sherwood, Judge of Kane County Court, Elgin, Ill. First National Bank, Elgin, Ill. Home National Bank, Elgin, Ill. Lowrie & Black, publishers Daily News and Weekly Advocate, Elgin, Ill. Hon. Norman J. Coleman, St. Louis, Mo., and any reliable nursery firm in the United States.

Yours truly,

D. HILL

Evergreen Specialist, Dundee, Ill.

EVERGREEN SEEDLINGS.

Nursery Grown, Thrifty, Fine Plants, Well Rooted.

NORWAY SPRUCE.

		Per 10	Per 100	Per 1,000	Per 10,000
NORWAY SPRUCE.....	15 to 18 inches,	\$.50	\$3 00	\$25.00	\$200.00
" "	12 " 15 "	.35	2.00	15.00	125.00
" "	10 " 12 "	....	1.50	12.00	100.00
" "	8 " 10 "	....	1.25	9.00	80.00
" "	6 " 8 "	....	1.00	7.00	60.00
" "	4 " 6 "	....	.75	5.00	40.00
" "	3 " 4 "	....	.60	3.50	30.00

AMERICAN WHITE SPRUCE.

WHITE SPRUCE	6 to 8 inches,	.40	2.00	15.00	125.00
" "	4 " 6 "	.30	1 50	10.00	90.00
" "	2 " 4 "	....	1 00	6 00	50.00

PICEA PUNGENS OF COLORADO.

BLUE SPRUCE	6 to 8 inches,	1.00	7.00	60.00	....
" "	4 " 6 "	.60	5 00	40.00	....
" "	2 " 4 "	.50	4.00	30.00	250.00

CONCOLOR OF COLORADO.

CONCOLOR—Choice,	4 to 6 inches,	.75	5.00	40.00	....
BALSAM FIR.....	4 " 6 "	.35	2 00	15.00	....

PINE, SCOTCH.

SCOTCH PINE—Nice.....	12 to 15 inches,	.50	2.00	15.00	125.00
" " ".....	10 " 12 "	.35	1.50	10.00	90.00
" " ".....	8 " 10 "	....	1.25	8.00	70.00
" " ".....	6 " 8 "	....	1.00	7.00	60.00
" " ".....	4 " 6 "	....	.75	5.00	45.00

AUSTRIAN PINE.

AUSTRIAN PINE.....	10 to 12 inches,	.35	1.50	12.00	100.00
" "	8 " 10 "	....	1.25	9 00	80.00
" "	6 " 8 "	....	1 00	7.00	60.00
" "	4 " 6 "	....	.75	6.00	50.00

WHITE PINE.

WHITE PINE.....	4 to 6 inches,	....	1.00	8.00	70.00
" "	3 " 4 "	....	.75	5.00	40.00

PINUS MONTANA.

DWARF MOUNTAIN PINE, nice	6 to 8 inches,	.50	2.50	15.00	125.00
" " ".....	4 " 6 "	.30	1.75	10.00	90.00
" " ".....	4 " 4 "	....	1.00	8.00	70.00

RED CEDAR, FROM NORTHERN SEED.

RED CEDAR, nice.....	4 to 6 inches,	.30	2 00	12 00	100.00
" "	3 " 4 "	....	1.25	9.00	80.00

RED CEDAR FROM COLORADO SEED.

RED CEDAR, Silver Tints.....	2 to 4 inches,	.50	2.00	15 00
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AMERICAN ARBOR VITAE.

ARBOR VITAE, AM'R	4 to 6 inches,	.25	2.00	10.00	90.00
" " ".....	3 to 4 "	1.00	7.00	60.00

CHINESE ARBOR VITAE.

PYRAMIDAL CHINESE.....	10 to 12 inches,	.50	3 00	25.00	....
" "	6 " 8 "	.35	2.00	15.00	....
" "	4 " 6 "	....	1 50	10.00	....

COMPACTA CHINESE	.....10	"	12	"	.50	3.00	25.00	....
"	.....6	"	8	"	.35	2.00	15.00	....
"	.....4	"	6	"	....	1.50	10.00	....
GOLDEN CHINESE	.....8	"	10	"	.50	3.00	25.00	....
"	.....6	"	8	"	.35	2.00	15.00	....
"	.....4	"	6	"	....	1.75	12.00	....

The Chinese Arbor Vitæ are not hardy in northern Illinois, Iowa, Minnesota and other northwestern states. They do well in the central and southern states.

Most of above varieties can be supplied in lots of 100,000 and over. Write for prices on large lots.

SPECIAL NOTICE.

I wish to call the attention of farmers and others who may desire to plant Evergreens for a wind-break, shelter belt, or ornamental purposes, that my trees must not be compared with those you may have purchased of some traveling tree peddler, who has no reputation at stake. My aim is to send out only such stock that, with proper care in planting, will be sure to grow. My trees are taken direct from the nursery, are well assorted, and packed in light boxes with plenty of damp moss, by men of long experience, so that they can be shipped to any part of the world with safety.

The question is often asked, what is the best size evergreens to plant? For the benefit of beginners and others, will say, transplanted trees are far better than seedlings, and in the end, sometimes much the cheapest. The size to order must, to a certain extent, be governed by the size of your pocketbook. The following sizes are from two to three times transplanted, therefore are well rooted and always give satisfaction: 18 to 24 inches, 2 feet, 12 to 18 inches, 2 to 3 feet.

TRANSPLANTED EVERGREENS.

From One to Three Times Transplanted, Stocky
and Well Rooted.

NORWAY SPRUCE.

		Each.	Per 10	Per 100	Per 1,000
NORWAY SPRUCE, nice	..... 4 feet	\$.70	\$6 00	\$50.00	\$400.00
"	..... 3 "	.50	4.50	40.00	300 00
"	selected 2 to 3 "	.40	3 50	30.00	250.00
"	not " 2 to 3 "	.30	2.50	20 00	175.00
"	" 2 "	.35	3.00	25.00	200.00
"	good 2 "	.25	2.00	18.00	150.00
"	..... 18 to 24 inches	.20	1.50	12 00	100.00
"	" 12 to 18 "	.15	1.00	8.00	70.00
"	" 12 to 15 "	.10	.75	5.00	40.00
"	" 10 to 12 "	.....	.50	3.50	30.00
"	" 8 to 10 "	.....	.....	2.50	20.00

AMERICAN WHITE SPRUCE.

WHITE SPRUCE	..... 5 to 6 feet	1.00	9.00	75.00	....
"	..... 4 "	.75	6.00	50.00	....
"	..... 3 to 4 "	.60	5.00	40.00	....
"	..... 2 to 3 "	.40	3.50	30.00	....
"	..... 18 to 20 inches	.30	2.50	20.00	....
"	..... 12 to 18 "	.20	1.75	12.00	100.00
"	..... 10 to 12 "	.15	1.00	7.00	60.00
"	..... 8 to 10 "	.10	.75	5.00	40.00
"	..... 6 to 8 "	....	.60	4.00	30.00

HEMLOCK SPRUCE.

HEMLOCK SPRUCE	..... 4 feet	.75	6.00	50.00	....
"	..... 3 "	.60	5.00	40.00	....
"	once transplanted 10 to 12 in.	.10	.75	6 00	50.00
"	" 6 to 10 in.	.....	.60	4.50	40.00

BLUE SPRUCE.**PICA PUNGENS, FROM COLORADO SEED.**

BLUE SPRUCE, selected blue....	4½ to 5 feet	5.00	40 00
" " " " pr pair " " " "	" " " "	9.00	....	....	....
" " " " " " " "	3 to 4 " "	4.00	30.00	....	....
" " " " pr pair " " " "	" " " "	7.00	....	....	....
" " " " " " " "	2 to 3 " "	3.00	25.00	....	....
" " not sel'd, as they run,					
..... blue and green, 10 to 12 inches,		.50	4.00	30.00	250.00
" " not sel " " " " 8 to 10 " "		.40	3 50	25.00	200.00
" " " " " " " " 6 to 8 " "		.25	2 00	20.00	175.00

DOUGLAS SPRUCE FROM COLORADO SEED.

DOUGLAS SPRUCE	5 to 6 feet,	5.00	40.00
" " " " " " " "	... per pair " " " "	9.00	....	....	....
" " " " " " " "	2 to 5 " "	1.00	9 00	....	....
" " " " " " " "	18 to 24 inches	.75	5.00	35 00	....
" " " " " " " "	12 to 15 " "	.30	2 50	15.00	....
" " " " " " " "	10 to 12 " "	.20	1 75	12.00	100.00

ABIES CONCOLA FROM COLORADO SEED.

CONCOLOR.....	10 to 12 inches,	.50	4.00	30 00	....
" " " " " " " "	8 to 10 " "	.40	3 00	25.00	....

BLACK HILLS SPRUCE ABIES ALBA.

BLACK HILLS SPRUCE.....	10 to 12 inches	.25	2 00	10 00	75.00
" " " " " " " "	6 to 10 " "	....	1.50	7.00	55.00

BALSAM FIR.

BALSAM FIR	2 to 2½ feet,	.30	2 50	20 00	180.00
" " " " " " " "	2 " "	.25	2.00	16.00	150.00
" " " " " " " "	18 to 24 inches,	.20	1 75	12 00	100.00
" " " " " " " "	12 to 15 " "	.15	1.25	10.00	90.00
" " " " " " " "	10 to 12 " "	.10	.90	7.00	60.00
" " " " " " " "	6 to 10 " "	....	.75	5.00	40 00

SCOTCH PINE.

SCOTCH PINE, extra heavy stock, .	15 feet,	5.00	40.00
" " " " " " " "	12 " "	4 00	30.00	....	....
" " " " " " " "	5 to 6 " "	.75	5 00	40.00	300.00
" " " " " " " "	4 to 5 " "	.50	4.00	30.00	200.00
" " " " " " " "	3 to 4 " "	.40	3 00	20.00	175.00
" " " " " " " "	3 " "	.40	2 50	16 00	140.00
" " " " " " " "	2 to 3 " "	.25	2 00	12.00	100.00
" " " " " " " "	2 " "	.20	1.75	9.00	80.00
" " " " " " " "	18 to 24 inches,	....	1.25	7.00	60.00
" " " " " " " "	10 to 12 " "	....	.75	5.00	40.00

AUSTRIAN PINE.

AUSTRIAN PINE.....	5 to 6 feet,	.75	5.00	40 00
" " " " " " " "	2 to 3 " "	.40	3.00	15.00	120.00
" " " " " " " "	2 " "	.30	2 00	12.00	100 00
" " " " " " " "	18 to 24 inches,	.25	1.50	10 00	90 00
" " " " " " " "	15 to 18 " "	.20	1 25	7.00	60.00

WHITE PINE.

WHITE PINE.....	2 to 3 feet,	.40	3.00	25 00	200.00
" " " " " " " "	18 to 24 inches,	.30	2.00	15.00	125.00
" " " " " " " "	15 " 18 " "	.25	1.50	12 00	100.00
" " " " " " " "	12 " 15 " "	.20	1.25	8.00	75 00
" " " " " " " "	8 " 10 " "	.12	1.00	6 00	50 00

DWARF MOUNTAIN PINE.

MOUNTAIN PINE.....	3 to 4 feet,	1.00	9 00	75.00	....
" " " " " " " "	3 " "	.75	6 00	50.00	....
" " " " " " " "	2 " "	.60	5.00	40 00	....
" " " " " " " "	18 to 24 inches,	.40	3 00	25 00	....
" " " " " " " "	10 " 12 " "	.20	1.50	10 00	90.00

NORTHERN RED CEDAR.					
RED CEDAR.....	18 to 24 "	.30	2.00	15.00	125.00
" "	12 " 18 "	.20	1.50	10.00	90.00
" "	10 " 12 "	.15	1.25	8.00	70.00
" "	6 " 10 "	.10	.80	6.00	50.00
" "	4 " 6 "	....	....	4.00	35.00
SILVER CEDAR FROM COLORADO.					
SILVER CEDAR, from Colorado.....	2 feet,	1.00	8.00	70.00	....
" " " "	18 inches,	.70	6.00	50.00	....
" " " "	12 "	.50	4.00	30.00	....
JUNIPER COMMUNIST.					
ENGLISH JUNIPER.....	12 to 15 inches,	.30	2.00	15.00	....
" "	10 " 12 "	.20	1.50	10.00	90.00
IRISH JUNIPERS.					
IRISH JUNIPERS.....	4 feet,	.80	7.00	55.00	....
" "	3 "	.60	5.00	40.00	....
" "	2 to 2½ "	.50	4.00	30.00	....
" "	2 "	.40	3.50	30.00	....
" "	18 to 24 inches,	.35	3.00	25.00	....
" "	12 " 18 "	.30	2.50	20.00	....
" "	10 " 12 "	.25	2.00	15.00	....
" "	8 " 10 "	.20	1.50	10.00	90.00
" "	6 " 8 "	.15	1.00	7.00	60.00
ARBORVITAE AMERICAN.					
AMERICAN ARBORVITAE.....	3 to 4 feet,	.50	4.00	35.00	....
" " " "	3 "	.40	3.50	28.00	....
" " " "	2 " 3 "	.35	3.00	20.00	175.00
" " " "	2 "	.30	2.50	15.00	125.00
" " " "	18 " 24 inches,	.20	1.50	12.00	100.00
" " " "	12 " 18 "	.15	1.00	8.00	65.00
" " " "	10 " 12 "	.10	.75	5.00	40.00
SIBERIAN ARBORVITAE.					
SIBERIAN, beauties.....	2 feet,	.60	5.00	35.00	....
" "	18 to 24 inches,	.50	4.00	30.00	....
" "	12 " 18 "	.35	3.00	25.00	....
" "	10 " 12 "	.25	2.00	12.00	....
COMPACTA ARBORVITAE.					
COMPACTA, extra fine.....	2 feet,	.75	6.00	50.00	....
" " " "	18 inches,	.50	4.00	30.00	....
" " " "	12 "	.35	3.00	25.00	....
PYRAMIDAL ARBORVITAE.					
PYRAMIDAL, nice.....	3 feet	.75	6.00	50.00	....
" " " "	2 "	.60	5.00	35.00	....
" " " "	12 to 18 inches,	.40	3.50	25.00	....
" " " "	10 " 12 "	.30	2.50	15.00	....
HOVEY'S GOLDEN ARBORVITAE.					
HOVEY'S GOLDEN, nice.....	1½ feet,	.50	4.00	30.00	....
" " " "	12 inches,	.40	3.00	25.00	....
" " " "	8 to 10 "	.30	2.50	15.00	....

HEDGE PLANTS.

The following Evergreens and Shrubs are well adapted for Ornamental Hedges.

		Per 50	Per 100	Per 500	Per 1,000
ARBOR VITAE, American.....	2 feet,	7.50	15.00	62.00	125.00
" " " "	1½ "	5.00	10.00	45.00	90.00
" " " "	1 foot,	3.50	7.00	30.00	60.00
" " " "	8 to 10 inches,	2.50	4.00	17.50	32.50
WHITE SPRUCE, American.....	18 "	7.00	12.00	55.00	100.00
" " " "	12 "	5.00	9.00	45.00	80.00
" " " "	8 to 10 "	2.50	5.00	22.50	40.00

NORWAY SPRUCE.....	2 feet,	9.00	16.00	75.00	140.00
“ “.....	18 inches,	6.00	10.00	45.00	80.00
“ “.....	12 “	2.50	4.00	17.50	30.00
“ “.....	8 to 10 “	1.25	2.00	9.00	17.00
BARBERRY, common.....	10 “ 12 “	5.00	9.00	40.00	75.00
“ purple.....	10 “ 12 “	8.00	15.00	65.00	....
PREVET, California.....	12 “ 15 “	3.00	5.00	20.00	35.00
“ “.....	10 “ 12 “	2.00	3.50	15.00	25.00
OSAGE ORANGE.....	2 yrs old,	1.00	1.50	5.00	9.00
“ “.....	1 yr	.60	1.00	3.00	5.00
LOCUST.....	12 inches,	.75	1.00	4.00	7.00
JAPAN QUINCE.....	12 to 15 “	8.00	14.00	....	....
“ “.....	10 “ 12 “	6.00	10.00	40.00	....
HONEY SUCKLE, upright.....	10 “ 12 “	6.00	10.00	....	....
HYDRANGEA, G. P.....	2 “ 3 feet,	8.00	15.00	....	....
“ “.....	10 “ 12 inches	5.00	9.00	35.00	....
RUSSIAN MULBERRY.....	10 “ 12 “	1.00	1.75	4.00	60.00

SPECIAL OFFER.

I make the following Special Offer as an inducement to beginners and others who wish to try a sample of my stock. The trees here offered are all No. 1, and first class in every way, two or three times transplanted, extra well rooted; they cannot fail to give satisfaction. The sizes here offered are the cheapest, safest and best that can be planted.

They will be well packed and delivered to express or freight office on receipt of price below mentioned. No charge for packing.

SPECIAL OFFER.

LIST NO 1. PRICE \$10.

20 Norway Spruce.....	2 feet
20 Balsam Fir.....	1½ “
20 Scotch Pine.....	2 “
18 Austrian Pine.....	2 “
15 American Arbor Vitae.....	2 “
20 European Larch.....	2 “
3 Mountain Pine.....	2 “
3 White Pine.....	1½ “

LIST NO 3. PRICE \$10.

50 Norway Spruce.....	1 foot
50 Balsam Fir.....	1 “
50 Scotch Pine.....	1 “
50 Austrian Pine.....	1 “
25 American Arbor Vitae.....	1 “
25 White Pine.....	1 “
10 Mountain Pine.....	1 “
10 White Spruce.....	1 “

LIST NO. 2, PRICE \$5.

9 Norway Spruce.....	2 feet
9 Balsam Fir.....	1½ “
9 Scotch Pine.....	2 “
9 Austrian Pine.....	2 “
7 American Arbor Vitae.....	2 “
9 European Larch.....	2 “
1 Mountain Pine.....	2 “
2 White Pine.....	1½ “

LIST NO. 4. PRICE \$5.

22 Norway Spruce.....	1 foot
22 Balsam Fir.....	1 “
22 Austrian Pine.....	1 “
22 Scotch Pine.....	1 “
10 American Arbor Vitae.....	1 “
10 White Pine.....	1 “
5 Mountain Pine.....	1 “
4 White Spruce.....	1 “

PREMIUM FOR CLUBS.

To anyone who will get up a club among his friends and neighbors for the four special offers or for the amount of \$30.00, your choice of lists and numbers, I will pack and deliver on cars here free of charge your choice of list No. 2 or 4.

PREMIUM NO. 2. 100 SEEDLINGS.

By sending, together with your order for either of above special offers, 25 or more names of farmers and others whom you know to be likely to want some of my stock, you will receive, together with said order, 100 Seedlings, 8 to 10 inches, equal parts Norway Spruce, Scotch and Austrian Pine. None but those ordering Special offers will be entitled to this premium. Cash or bank references must accompany orders, which should be sent as early as possible.

N. B.—Parties receiving more than one price list will confer a favor by handing it to a friend.

Nursery Grown Forest Trees.

		SEEDLINGS.	100	1,000	10,000
EUROPEAN LARCH.....	12 to 15 inches.....	\$2.00	\$15.00	\$130.00	
“ “.....	10 “ 12 “.....	1.50	12.00	100.00	
“ “.....	6 “ 10 “.....	1.35	10.00	90.00	
“ “.....	4 “ 6 “.....	1.00	8.00	70.00	
		EUROPEAN WHITE BIRCH.			
WHITE BIRCH.....	12 to 15 inches.....	2.50	15.00	125.00	
“ “.....	10 “ 12 “.....	2.00	12.00	100.00	
“ “.....	6 “ 8 “.....	1.50	8.00	70.00	
		LINDEN.			
EUROPEAN LINDEN.....	8 to 10 inches.....	2.50	15.00	125.00	
“ “.....	6 “ 8 “.....	2.00	12.00	100.00	
AMERICAN “.....	10 “ 12 “.....	2.50	15.00	125.00	
“ “.....	6 “ 10 “.....	2.00	12.00	100.00	
WHITE ASH, AMERICAN.....	2 feet.....	2.50	15.00	125.00	
“ “.....	12 “ 18 inches.....	1.00	6.00	45.00	
“ “.....	10 “ 12 “.....	.75	4.00	35.00	
“ “.....	6 “ 10 “.....	.50	3.00	20.00	
MOUNTAIN ASH, EUROPEAN.....	15 “ 18 “.....	3.00	15.00		
“ “.....	10 “ 12 “.....	2.00	12.00	100.00	
“ “.....	6 “ 10 “.....	1.50	10.00	90.00	
ELM, WHITE AMERICAN.....	10 “ 12 “.....	1.50	8.00	70.00	
“ “.....	6 “ 10 “.....	1.00	5.00	40.00	
		MAPLES.			
NORWAY MAPLE.....	8 “ 10 “.....	2.50	20.00		
“ “.....	6 “ 8 “.....	2.00	14.00	125.00	
“ “.....	4 “ 6 “.....	1.50	12.00	100.00	
SOFT MAPLE.....	2 “ 2½ feet.....	2.00	12.00	100.00	
“ “.....	18 “ 24 inches.....	1.50	8.00	70.00	
“ “.....	12 “ 18 “.....	1.00	5.00	40.00	
“ “.....	10 “ 12 “.....	.75	4.50	30.00	
“ “.....	6 “ 10 “.....	.75	2.50	20.00	
HARD OR SUGAR MAPLE.....	10 “ 12 “.....	2.00	15.00		
“ “.....	6 “ 10 “.....	1.50	10.00	80.00	
BOX ELDER.....	10 “ 12 “.....	1.00	4.00	30.00	
“ “.....	6 “ 10 “.....	.75	3.00	20.00	
CATALPA SPECIOSA.....	12 “ 18 “.....	1.00	5.00	40.00	
“ “.....	10 “ 12 “.....	.75	4.00	30.00	
“ “.....	6 “ 8 “.....	.60	3.00	20.00	
MULBERRY, RUSSIAN.....	18 “ 20 “.....	3.00	20.00		
“ “.....	12 “ 18 “.....	2.00	12.00	100.00	
“ “.....	10 “ 12 “.....	1.75	10.00	90.00	
“ “.....	6 “ 10 “.....	1.00	6.00	50.00	

Nursery Grown Forest and Ornamental Trees.

		TRANSPLANTED.	10	100	1,000	10,000
EUROPEAN LARCH.....	4 to 6 feet.....	\$2.30	\$15.00	\$125.00		
“ “.....	3 “ 4 “.....	1.75	10.00	75.00		
“ “.....	2 “ 3 “.....	1.50	7.00	60.00		
“ “.....	18 “ 24 inches.....	1.00	5.00	45.00		
“ “.....	10 “ 12 “.....	.75	3.50	30.00		
WHITE BIRCH, EUROPEAN.....	8 “ 10 feet.....	5.00	35.00			
“ “.....	4 “ 6 “.....	3.00	20.00			
“ “.....	18 “ 24 inches.....	1.00	7.00	55.00		
LINDEN, AMERICAN, ex pice, 3 in diameter.....		20.00	175.00			
“ “.....	2 “.....	15.00	100.00			
“ “.....	8 to 10 feet.....	7.50	50.00			
“ “.....	6 “ 7 “.....	5.00	30.00			
“ “.....	4 “ 5 “.....	2.00	12.00	100.00		
“ “.....	2 “ 3 “.....	1.00	6.00	50.00		
“ “.....	12 “ 18 inches.....	.50	4.00	35.00		

LINDEN, EUROPEAN.....	6 "	8 feet.....	7.50	60.00	
" " " " " " " "	3 "	4 " " " " " " "	5.00	35.00	
" " " " " " " "	10 "	12 inches.....	75	5 00	40.00
ELMS, AMERICAN WHITE	4 in	caliper.....	25.00	200.00	
" " " " " " " "	3 "	" " " " " " " "	20.00	175.00	
" " " " " " " "	2 "	" " " " " " " "	10.00	70.00	
" " " " " " " "	"	8 to 10 feet " " " "	5.00	35.00	
" " " " " " " "	6 "	8 " " " " " " "	3.00	20.00	
" " " " " " " "	4 "	5 " " " " " " "	2.00	12.00	100.00
" " " " " " " "	2 "	3 " " " " " " "	1.00	6 00	45.00
ASH, WHITE AMERICAN..	3 in	caliper " " " " " "	20.00	175.00	
" " " " " " " "	2 to 3 "	" " " " " " " "	15.00	100.00	
" " " " " " " "	2 "	" " " " " " " "	7.50	50 00	
" " " " " " " "	"	8 to 10 feet " " " "	5.00	25 00	200.00
" " " " " " " "	5 "	6 " " " " " " "	2.00	10.00	75.00
" " " " " " " "	3 "	4 " " " " " " "	1.00	6 00	40.00
MOUNTAIN ASH, EUROPEAN	7 to 8 feet.....	" " " " " " " "	7.50	50.00	
" " " " " " " "	5 "	6 " " " " " " "	5 00	35.00	
MOUNTAIN ASH, Oak leaved	6 "	7 " " " " " " "	7.50	50 00	
" " " " " " " "	4 "	5 " " " " " " "	5.00	40.00	
CATALPA.....	3 in	caliper " " " " " "	15.00	100.00	
" " " " " " " "	2 "	" " " " " " " "	10.00	65.00	
" " " " " " " "	"	8 to 10 feet " " " "	5.00	30.00	
" " " " " " " "	6 "	8 " " " " " " "	3.00	20 00	
" " " " " " " "	4 "	6 " " " " " " "	1.50	12.00	90.00
CAROLINA POPULAR.....	6 "	8 " " " " " " "	5.00	30.00	200.00
" " " " " " " "	4 "	6 " " " " " " "	3.00	15.00	100.00
MAPLE, SOFT.....	8 "	10 " " " " " " "	4 00	30.00	
" " " " " " " "	4 "	6 " " " " " " "	2.50	15.00	
" " SUGAR.....	2 in	caliper " " " " " "	15.00	100.00	
" " " " " " " "	6 to 8 feet " " " "	" " " " " " " "	5.00	35.00	
" " " " " " " "	3 "	4 " " " " " " "	3.00	20.00	
" " " " " " " "	2 "	3 " " " " " " "	2 00	15.00	
" " NORWAY.....	8 "	10 " " " " " " "	10.00	65.00	
" " " " " " " "	4 "	6 " " " " " " "	6.00	40 00	
" " " " " " " "	2 "	3 " " " " " " "	2.50	15.00	
" " " " " " " "	"	18 to 24 inches..	1.00	6 00	40 00
" " " " " " " "	12 "	15 " " " " " " "	75	4 00	30.00
" " Ash leaved, or Box Elder	4 in	caliper " " " " " "	25.00	175.00	
" " " " " " " "	3 "	" " " " " " " "	20 00	125 00	
BOX ELDER " " " " " "	2 "	" " " " " " " "	10 00	70.00	
" " " " " " " "	"	8 to 10 feet.....	5.00	30 00	
" " " " " " " "	6 "	8 " " " " " " "	3.00	15 00	
" " " " " " " "	4 "	6 " " " " " " "	2.00	10.00	
HORSE CHESTNUT.....	4 "	5 " " " " " " "	6 00	40.00	
" " " " " " " "	12 "	18 inches.....	1 00	7 00	

WEeping TREES.

CUT LEAF WEEPING BIRCH	6 to 8 feet.....	12.00	70.00	
" " " " " " " "	5 "	6 " " " " " " "	10.00	50.00
" " " " " " " "	3 "	4 " " " " " " "	7 00	35.00
WILLOWS, KILMERNOOK....	2 yr heads.....	12.00	70 00	
" " " " " " " "	1 "	" " " " " " " "	8.00	50.00
ELM, CAMPERDOWN.....	1 "	" " " " " " " "	12 00	90.00
MULBERRY, TEAS WEEPING	2 "	" " " " " " " "	20 00	
" " " " " " " "	1 "	" " " " " " " "	15 00	

See page 19

HARDY ORNAMENTAL FLOWERING SHRUBS.

THE HYDRANGEA GRANDIFLORA continues to be one of the best and most handsome ornamental shrubs ever grown. It blooms finely the first year and gets better and grows larger with age; it grows 3 to 4 feet high, is perfectly hardy in all parts of the country, needs no protection in winter, blooms in July and August when other flowers are scarce, and remains in bloom two or three months. The flowers are pure white, afterwards changing to pink and rich coppery red, and are borne in immense pyramidal trusses more than a foot long and nearly as much in diameter. Large 3-year-old plants, cut back, ready for planting will bloom first season.

Each. Doz.

\$1.75 \$6.00
.50 4.00

Two year old, cut back, strong plants.

SPIREA—VAN HOUTTE. The grandest of all Spireas. It is a beautiful ornament for the lawn at any season, but when in flower it is a complete fountain of white bloom, the foliage hardly showing. Clusters of twenty to thirty flat white florets make up the raceme, and these clusters are set close along the drooping stems. Perfectly hardy and an early bloomer. Strong plants 3 to 4 feet.

.75 7 00

Strong plants, 2 to 2½ feet.

.50 4.00

WIEGELAS.—WIEGELA ROSEA. This is one of the most charming shrubs in cultivation; it cannot be too highly recommended; the flowers are large and of a deep rosy color; they are borne in such profusion that the whole plant appears a mass of lovely bloom; large plants.

.75 7.00

Pure White large plants

.75 7.00

The above set of four first sizes. \$3.50

CLEMATIS.—By all odds the most popular of all hardy garden climbers, of easy growth, need but slight protection, and reward the grower with innumerable blossoms; large 3-year-old roots.

1.00

SNOW FLAKE.—Very fine white variety blooming freely. A three-year-old plant bearing hundreds of blossoms.

1.00

JACKMANII.—Large purple, well known. Very hardy. The finest of all. Large three-year old roots

1.00

COCCINIA.—Immensely popular, growing full 12 feet high, covering the walls with numerous bright coral scarlet flowers. Large 3-year-old roots.

1.00

HYBRID PERPETUAL ROSES.



This class of roses is admirably suited for garden culture, for the formation of rose beds, hedges and permanent plantations where hardy varieties of roses are desired. They are of easy culture and luxuriate in a deep rich soil. They are benefited by mulching of leaves or strawy manure placed around the roots in the fall of the year. Prune according to the habit of growth, cutting back close all weak shoots, and shortening the long canes to a convenient length.

My roses are all grown in open ground, are strong, heavy rooted plants, two to four years old; will give an abundance of bloom the first season. Only the very best varieties are offered.

GEN. JACQUEMINOT.—Brilliant crimson; very large, globular and excellent; a free bloomer, unsurpassed in its clear, rich crimson scarlet color; large plants.

.50

ANNA DIEDSBACH.—Bright rose color; very large and showy; particularly fine in bud; flower slightly cupped; a vigorous grower; one of the best large plants.....	.50
BARONESS ROTHSCCHILD.—One of the most beautiful of all Roses. The flowers are of immense size, perfect form and exquisite color, a rich and lovely shade of pale pink, delightfully perfumed; an ideal Rose in every way. Being very difficult to propagate, it is always scarce and high-priced. Strong large plants.....	1.00
MAD MASSON.—Large and double; color reddish-crimson, of fine form and substance; a constant bloomer, and invaluable for bedding purposes; one of the best.....	.50
PIERRE NOTTING.—Blackish red, shaded with violet, very large and full, form globular, habit good; one of the best dark roses.....	.50
PRINCE CAMILLE DE ROHAN.—Deep, velvety crimson; large moderately full.....	.50
PAUL NEYRON.—Flowers very large, often measuring five inches in diameter, perfect in shape; color deep shining rose, very fresh and pretty. It is a very strong grower and remarkably free bloomer. Large plants...	.50
ELIZA BOELLE.—An elegant Rose; very full and double, white, sometimes clouded with blush and tinged with amber, and delightfully perfumed; color pure ivory. Large plants.....	.75

MOSS ROSE.

APHELIS PURPUREA.—Rose, shaded lilac.....	
BLANCH MOREAU.—Pure white, large, full and perfect form.....	
CAPT. JOHN INGRAHAM.—Purplish crimson, violet shade. Large plants.....	.50

COLLECTION, HARDY CLIMBING ROSES.

PRAIRIE QUEEN.—Clear, bright, pink, sometimes with white stripe; large, compact and globular, very double and full; blooms in clusters; one of the finest.....	.50
BALTIMORE BELLE.—Pale blush, variegated, carmine, rose and white; very double; flowers in beautiful clusters, the whole plant appearing a perfect mass of bloom; one of the very best climbing roses.....	.50
CHAMPNEY.—A fine, hardy Pillar Rose, quite double and fragrant; flowers deep rose, changing to clear pink; desirable.....	.50
GEM OF THE PRAIRIE.—Bright violet crimson; large, double and fragrant, not so free a bloomer as some, but a valuable sort.....	.50
GREVILLE, OR SEVEN SISTERS.—Flowers in large clusters; varies in color from white to crimson, large plants.....	.50

FRUIT TREES.

APPLES, all the best and hardiest variety for the north-west, 7 to 8 feet.....	Each	10	100
5 " 6 "	\$.45	\$ 4.00	\$30.00
4 " 5 " .....	.30	2.50	20.00
4 " 5 " .....	.20	1.50	10.00
CRA B TREES, Transcendent, Hystop, Gen. Grant, W's. No. 20.....			
6 to 7 feet.....	.40	3.50	30.00
5 " 6 " .....	.30	2.50	20.00
4 " 5 " .....	.20	1.75	15.00
CHERRY TREES, early Richmond English Morelo Olivet, Late Duke, 5 to 6 feet.....	.75	6.50	50.00
4 " 5 " .....	.50	4.00	30.00
PEAR TREES, Standard, 5 " 6 " .....	.70	6.00	45.00
" " " 4 to 5 " .....	.50	4.00	35.00
PLUM TREES, best varieties, 5 to 6 feet.....	.70	6.00	45.00
PEACH " " 4 to 5 " .....	.50	4.00	35.00

GRAPES.

I only offer a few of the hardest and best varieties.

MOORE'S EARLY.—Bunch large, berry large, round, with heavy blue bloom, vine exceedingly hardy, entirely exempt from mildew or disease. Its earliness makes it desirable for an early market; its hardiness particularly adapts it to Canada and northern portions of the United States; succeeds admirably in the south.....	Each	100
1 year, 20c; 2 years.....	.25	15.00

WORDEN. —A splendid large grape, of the Concord type, but earlier, larger in bunch and berry, and of decidedly better quality; vine hardier than that old standby, and every way as healthy.		
1 year, 20cts; 2 years.....	.25	15.00
GOLDEN POCKLINGTON. —A seedling from Concord. The vine is thoroughly hardy; strong grower; never mildews in vine or foliage. Called a white grape, but the fruit is a light golden yellow, clear, juicy and sweet to the center, with little or no pulp; bunches very large; sometimes shouldered; berries round and very large and thickly set; quality, when fully ripe, much superior to Concord. 1 year, 25c; 2 yrs.....		
	.30	15.00
CONCORD. —A large, purplish-black grape, ripening about the middle of September; vines remarkably vigorous and free from disease, 2 years.....		
	.10	5.00

RASPBERRIES.

The raspberry should be planted in good rich soil, in rows five feet apart and three feet apart in the rows. As soon as they have done bearing, cut out the old wood to give more vigor to the young canes. 10 for 40c.....		
	.10	2.00
Black Caps, Mammoth Cluster, Ohio, Gregg, Red Raspberries, Crimson Beauty, Cuthbert or queen of the Market, Turner.....		

DEWBERRY.

LUCRETIA. —This is one of the low growing, trailing Blackberries; in earliness, size and quality it equals any of the tall growing sorts. The fruit which ripens early, is often 1½ inches long by 1 inch in diameter, soft sweet and luscious.....		
Per dozen \$1.00	.10	5.00

BLACKBERRIES.

Snyder.....		
Early Harvest, Early Cluster, Stone's Hardy, Kittatiny, Taylor's Prolific, Wilson's Early.....		
Per dozen, \$1.00	.10	5.00

STRAWBERRIES.

Wilson's, Crescent, Chas. Downing, Cumb, Triumph, James Vick, Jersey Queen, Manchester, Prince of Berries, Kentucky, Miner's Prolific, Parry, Sharpless, Jessie, Bidwell, Bubach....		
100, \$1.00, 1,000,	\$6.00	

GOOSEBERRIES.

Plant three to four feet each way, manure well and after fruit is gathered prune out all old wood.

ENGLISH VARIETIES.

CROWN BOB —Large, roundish, oval, red, hairy of first quality.		
WHITESMITH —Large, roundish, oval, yellowish white, slightly downy; of first quality.		
INDUSTRY —The best English Gooseberry yet introduced, of vigorous upright growth and a greater cropper than any known variety, and shows no sign of mildew; berries of the largest size, one and one-half inches in diameter, and of most excellent flavor, both pleasant and rich; color when fully ripe, dark red. 2 years; each, 50c; dozen, \$5; 100, \$30.		

AMERICAN VARIETIES.

DOWNING —Very large, handsome, pale green, and of excellent quality for both cooking and table use; bush a vigorous grower and usually free from mildew.		
HOUGHTON SEEDLING —Small to medium, roundish oval, pale red, sweet, tender, very good; plants spreading, shoots slender, enormously productive.		
SMITH'S IMPROVED —Large, pale, greenish yellow, skin thin of excellent quality, being unsurpassed by any other variety for table use or cooking; bush moderately vigorous and excessively productive.		
Two years old: each 20c.; doz. \$2.00; 100 \$12.00		

CURRENTS.

Set four feet apart in rich ground; cultivate well or mulch heavily, prune out old wood so that each remaining shoot will have room to grow. If the current worm appears, dust with hellebore; manure freely.

BLACK NAPLES.—Much larger than the Black English, sometimes measuring half an inch in diameter. Fine for wine or jellies.

CHERRY.—Berry sometimes more than half an inch in diameter, bunches short; the plant is very vigorous and productive when grown on good soil and well cultivated.

RED DUTCH.—An old variety, excellent and well-known.

VICTORIA.—Large, bright red, with very long bunches; late, a good bearer.

WHITE DUTCH.—An excellent and well known sort.

WHITE GRAPE.—Very large, yellowish white, sweet or very mild acid, excellent quality and valuable. 2 years. Each, 20c. Doz, \$2.00. 100, \$12.00.

ASPARAGUS.

Conover's Colossal, 1 year, per hundred, \$2 00
 " " 2 years, " " 3 00

RHUBARB.

Myatt's Linnaeus, Victoria, 1 year, Each, 10c. Per 100, \$7.00

Teas Weeping Mulberry.



Another season's growth fully sustains all we have heretofore claimed for this remarkable Tree—unequalled in gracefulness and beauty, combined with the strongest vigor, health and hardiness. And the unsolicited testimony of many who have it growing in various parts of the country, from Wisconsin and Canada to Florida—from the bleak hills of New England, the sunny vales of California, and the arid plains of Texas—all confirm our claim that it is the best Hardy Weeping Tree ever introduced.

The most GRACEFUL and beautiful of hardy weeping trees, and wholly unlike anything heretofore introduced; forming a perfect, umbrella shaped head, with long, slender, willowy branches, drooping to the ground, parallel with the stem. These hang like the most delicate vines from a hanging basket, and are swayed by the slightest breath of wind. All who see it agree that in light, airy gracefulness, and delicacy of form and motion, it is without a rival.

It is entirely free from the seeming formality and stiffness of the well known Kilmarnock Willow, and its lithe form and easy curves are the very opposite of the irregular and grotesque habit of the weeping Mountain Ash, Weeping Elms, Ash, etc.

It has BEAUTIFUL FOLIAGE—rather small, handsomely cut, or divided into lobes, and of a beautiful, fresh looking glossy green. In autumn many of the leaves are bordered with yellow, producing a very novel and pleasing effect.

Being a true Russian Mulberry, it possesses the WONDERFULLY VIGOROUS and healthy growth for which this species is so noted—is free from diseases and insects—and

It is ONE OF THE HARDIEST of trees, enduring unharmed, not only the severe cold of the North, but the far more destructive HEAT and DROUTH of the South and Southwest.

It is a long lived tree, flourishing in almost any soil and situation, wet or dry, and will be found particularly valuable in the Western and Southwestern states, where the Kilmarnock and other popular weeping trees utterly fail; and

It is one of the SAFEST and most successful of all trees to TRANSPLANT. It has a strong hold on life, and will endure exposure and hard treatment that will kill almost anything but Catalpa or Osage Orange.

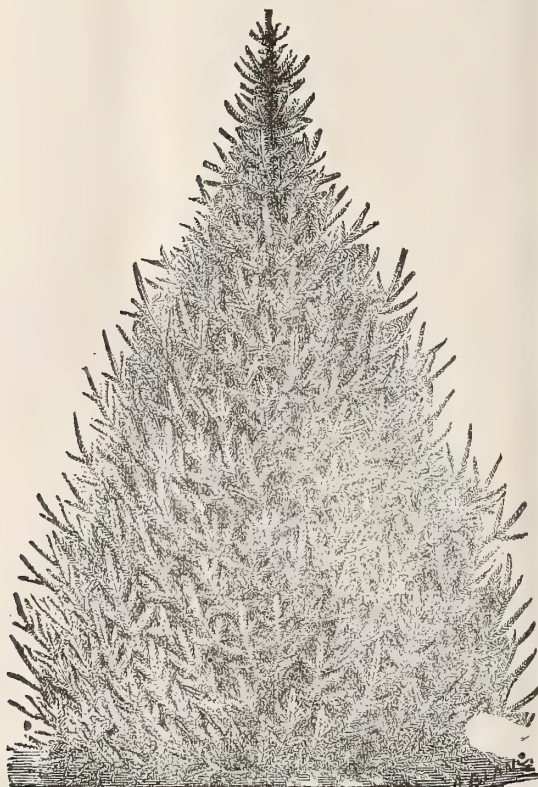
Rapid in growth and abundant in foliage, each branch adds to the formation of a finely rounded symmetrical head, making a MOST MAGNIFICENT little tree. It is especially desirable for ornamenting small grounds where trees of large size could not be used, and is no less appropriate in park and other extensive places.

It is admirably adapted to CEMETERY PLANTING. Indeed here is a field where it stands without a rival, filling a long felt want. A PERFECT GEM in size, style and exquisite form, together with all the hardiness, vigor and endurance that can be found in a tree. Cemetery trees are too often neglected and usually fail, but here is one peerless in beauty and suitableness that will be found equal to the situation.

It may be trained into a complete shady arbor, or a fine ornamental gateway, and in a great variety of fanciful forms.

STANDARD TREES. 5 TO 6 FOOT STEMS. ONE YEAR HEADS, \$2.50 EACH: FIVE FOR \$12; TEN for \$20

How to Plant a Place,



SOME REASONS FOR PLANTING.

1. It pays in the increased Value imparted to Land.

Trees possess great value as measured by their cost. Certain beautiful, stately shade and fruit trees are called to mind, which cost their owners not three dollars apiece all told, but which to-day would not be spared for \$300, \$500 or \$1,000 apiece. Railroads taking planted lands often pay from \$30 to \$300 each for trees occupying the same. The writer knows of \$600.00 apiece having been awarded in solid cash to the owner for trees that stood on some land that was needed for a certain town park.

The planting of these trees paid enormously. For, beside the money realized in the sales alluded to, the trees had previously given priceless delight in shade, shelter and beauty for many years. The cost was as nothing. Such returns not unfrequently follow judicious planting.

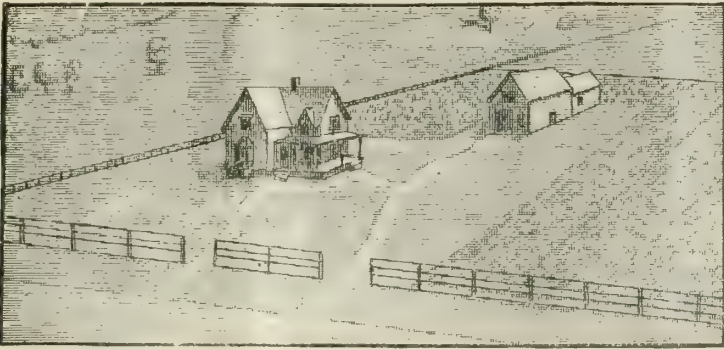
2. It pays in the better living and increased comforts that may spring from planted grounds.

The free use not only of fruits, but also of garden vegetables, should be enjoyed by every family in the land daily the year round. The children especially should be treated to all the luscious fruits, fresh and preserved, that they may desire to eat—none should be deprived of the light and excellent food to be found in the choice culinary vegetables so easily grown.

Many troublesome diseases are unknown to the free users of a largely vegetable diet. A convincing argument for the value of fruit is this: Settlers in a new country improve in health as their orchards begin to yield freely. Sailors in the frigid zone succumb to severe, sometimes fatal diseases, very soon after their supplies of fruits and vegetables give out.

Statisticians prove beyond any doubt that people on an average live longer now than in past centuries. This fact should in a large part be ascribed to the rapidly increasing use of fruits and vegetables in recent years in all civilized lands.

The presence of trees about a place contributes greatly to the comfort of man and beast. A dense belt of trees, especially evergreens, to the windward of a home will save the consumption of many an additional ton of coal in keeping the residence at an agreeable temperature. A similar gain comes in the saving of feed and the increased thrift of live stock in stables that are well sheltered from wintry storm. The summer life of man and beast is made more pleasant for the presence of an abundance of shade-trees. Increase the trees of the land, and we



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Fig. 1 A new place unimproved as regards tree-planting.

not only add to the attractiveness and comfort of our country, but that is provided which modifies the conditions of freshet, of drouth, and of sweeping gales and cold.

It pays in the profits that may be derived from the sale of surplus products.

Our population living in towns and villages become ready buyers from those who have a surplus. On this account the judicious culture of both fruits and vegetables is among the most profitable branches of land tillage. Tens of thousands of gardeners and fruit-growers all over our land derive larger incomes from their small plats of perhaps less than ten acres each, devoted to these crops, than does the average farmer from his many acres, given to farm crops.

A neighbor of the writer, from a Bartlett pear orchard of less than two acres, clears upwards of \$1,000 year after year on his crop. The sales from an acre of strawberries in the vicinity of thriving towns or villages is seldom less than \$300, and often reaches \$400 to \$800 a year.

Many a farmer with one fourth of his farm devoted to a well managed apple orchard obtains larger profits from that part than from the entire three fourths besides. The demand for choice fruits at paying prices is constantly growing; it will be a long while before all of our rapidly increasing population will be the free buyers and consumers of fruit that the best interests of all demand.

4. It pays in the greater beauty and interest trees, shrubs and plants impart to a place, especially evergreens.

We have only to compare the desirability of any home planted with a profusion of ornamental and fruit trees, shrubs, vines and plants, with the same or similar grounds (as for instance a new home) devoid of these. The one attracts with an irresistible charm; the other is bare and forbidding in a measure.



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Fig. 2. The same as Fig. 1, but embellished with trees, shrubs, vines, orchards, etc.

A costly house can never make up for lack of trees. One that is inexpensive but neat, with handsome garden surroundings, shows to far better advantage than a home costing double the money, but without the presence of lawn, trees and flowers.

When one tries to sell he may find this out. Let us not forget also that our attachments to trees and plants become almost as strong as to persons. Were parents to provide trees, shrubs and flowers freely about the home, and encourage their children to love, study and care for them, they would be bestowing the source of the highest, purest and most constant enjoyment, and in addition, the cause of health and ruggedness derived from being much in the open air.

WHAT CONSTITUTES JUDICIOUS PLANTING.

5. Good balance of the products of planting should be the aim.

It is a mistake to set out a hundred or more apple trees of one or two varieties and call that planting a place. It is a mistake to overdo in any one direction of planting and then to plant inadequately in other directions.

There certainly should be (a) an ample apple orchard, yielding by a good selection of varieties, this "best fruit under the sun" for use every month of the year; there should be (b) a liberal space devoted to each of the other hardy fruits, such as pears, plums, peaches, grapes, cherries, quinces, apricots, and strawberries, raspberries, currants, and other small fruits, for yielding the greatest possible variety in this line besides apples. In addition to fruits in abundance, let provision be made for (c) a complete vegetable garden, on which to depend for a wholesome variation in the food supply the year round.

Then let our natural appreciation of beauty and comfort be met by surrounding the home with (d) a handsome lawn adorned with (e) hardy ornamental trees, (f) flowering shrubs, (g) arbor and veranda vines, (h) garden plants, etc., and (i) evergreen or other windbreaks to protect the buildings and garden; (j) groves of forest and nut trees adjacent to the sables, or in out-of-the-way places; (k) trees along the highway, fences, creek, etc.

PLANNING A PLACE FOR PLANTING.

6. It is wise to work by plan from the beginning.

This should, as regards all the main features, be decided upon in the main and somewhat in detail, ahead of the selection of the planting stock or of operations on the land. Then the details can be carried out step by step, whether done in one year or over several years.

7. Arrange so that nothing be crowded. Crowding leads to cripples.

Have the full-grown tree, shrub or plant in your mind's eye, as you plan for the young slender stocks from the nursery or from the plant bed. It is a fact that many apple and other fruit plantations when they should be at their best are failures, because the trees are crowded. See schedule of distances below.

Street and lawn trees often stand so close that if one half or two-thirds of their number were removed the distance would be right for those remaining. Crowded trees never can develop into magnificent specimens. A dozen of the former are not equal to one stately tree monarch that has not been crowded; compare figures 3 and 4. The fault of crowding is a common one, and is attended with bad results in the culture of shrubs, vines and plants, and also in the vegetable garden. (See Fig. 5.)

Crowding trees against buildings and walks (see Fig. 5) is a common fault, arising from not having future size in mind when the young trees are set.

In case of buildings, it renders them damp, dark, unhealthy, leading also to decay of woodwork.

8. Close planting sometimes admissible.

It may sometimes be advisable to plant close with a view to thinning out in time: for instance in an orchard of apple or pear trees (these trees being slow to develop, and long lived), it is admissible to plant the short-lived peach, dwarf apples or pears, raspberries and other small fruits, calculating that after these have passed



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Fig. 3. A tree grown without crowding. See No. 7.

their prime the entire space may be devoted to the others.

Again, early to relieve the barren aspect of any place, the better kinds of trees, etc., may be planted at suitable distances for permanence, and then fill in more ordinary and rapid-growing kinds between, to be removed as the others require the space. Young elm trees, for instance, set along the street at 35 feet apart, may present a scant appearance. But putting some quick-growing poplars, silver maples or alders between, to be cut out after a few years, will lead to better early effects, while doing no injury in the long run. Still, if the writer thought that in any case the cutting out would be neglected, he could not recommend this course. A rich soil and high culture are wonderful factors in so pushing ahead tree growth that a newly planted place will soon put on an appearance of maturity.



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Fig. 4. What crowding does to disfigure trees. The sketch is a fair specimen of hundreds of street trees in Dundee and other towns. See Nos. 7 and 10.



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Fig. 5. The small Evergreens seemed far enough from the walk as they were planted, but six years of growth showed the mistake.— See No. 7.

9. Generally avoid straight lines about the lawn.

Nature teaches us that irregularity in the landscape or ornamental grounds leads to the best effects. Recall to mind any beautiful natural scenery, and you will note that it is strikingly devoid of straight lines.

Another point is this: The boundary and building outlines in the vicinity of the home lawn and ornamental parts are usually straight, hence out of accord with nature's principle of effective arrangement. Therefore, to have the lawn as pleasing as possible all the more requires that the laying out be done irregularly in some degree for relieving the existing straight lines already too strong.

Figs 6 and 7 impress this lesson. The first shows shade and ornamental trees arranged almost as one would lay out an orchard, adding to the existing straight lines found in the buildings and boundaries, other straight ones on the lawn. The latter shows the same place and the same trees, etc., arranged more naturally with curves and irregularity prevailing. The improvement is obvious to any eye. It cost no more to plant by the better than by the poorer plan.

10. Keep the center of the grass-plats open.

The trees, shrubs and flowers about the home should be arranged towards the margins of the different grass areas, as shown by Fig. 10, and seldom in the interior, as shown by Fig. 11. Openness of center causes lawn plats to present that greatest of garden charms, an air of breadth and repose. It also serves to secure a better view of whatever is planted on the lawn. These engravings it will be observed, show the same lawn with the same trees and shrubs used.

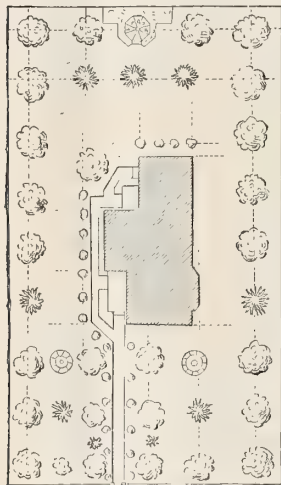
11. Plant ornamental growths in groups and masses.

This is the keynote of natural lawn arrangement, applying to trees, shrubs and plants, even down to annual flowers; all are finer for being grouped somewhat.

As a rule the larger trees, and especially the evergreens, should be planted

towards the boundaries, with smaller growers, shrubs and plants further in. A weeping or variegated tree, or a shade-tree, may here and there be brought away from the boundary with good effect. A lawn will appear of greater size if some vistas or views are kept open between the tree and shrub groups near the limits of the place in more distant parts.

If there are some handsome outside views, as a distant water or landscape scene, a church-spire, village, or the like, leave openings in the marginal plant-



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Fig. 6. Showing the effect of having lawn trees, shrubs, walks, etc., arranged in straight lines. See Nos. 14, 17

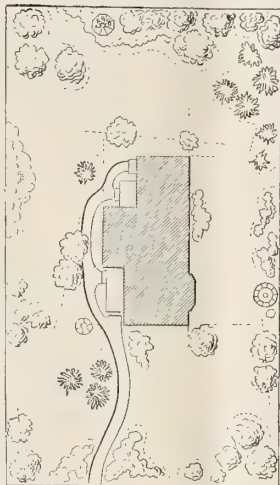


Fig. 7. Showing the advantage of placing the features of the lawn in irregular order and employing curves.

ings for giving glimpses of the same. But if an undesirable outside object is within reach of the eye, shut it off by placing a group of evergreens in the line of vision. A very excellent effect is created by grouping the various classes somewhat by themselves—as roses with roses, wiegeilas with wiegeilas, evergreens with evergreens—instead of scattering the respective sorts all over the place.

Plant most thickly in the direction of prevailing winds, not forgetting that this is the place of all others for evergreens.

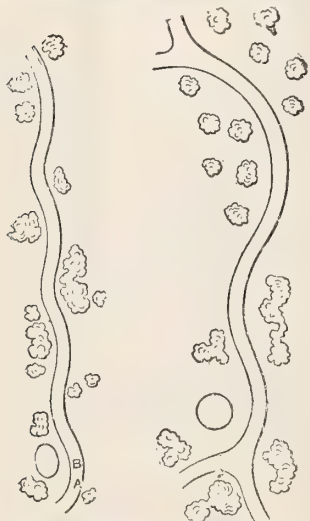


Fig. 8. A series of characterless curves, because the bends vary considerably in size. See No. 12.

12. Graceful curves contribute beauty; poorly defined ones are abominable.

As a rule, curves in walks should not be so rounded as to tempt the user to cut across from bend to bend. Should more than one bend to the same side be desirable, let such vary considerably in boldness to prevent a serpentine appearance, which is always objectionable. Figs. 8 and 9 show a bad and a good form of walks, having several curves.

Let the borders of flowers, shrubs, etc., be of curving outline. Curves here admit of a little more elaboration than do the same in walks, as a rule. Still the rule referred to and illustrated by the engravings should not be lost sight of.

Have but few gravel or other constructed walks on the lawn, and these only where much used; in all other places a closely clipped turf makes the most agreeable walk.

For laying out handsome curves, nothing is more helpful than a rope. Vary its position until the curves are graceful and satisfactory, then define the outline with stakes, to be kept in place until the border or walk is constructed.

HOW AND WHAT TO ORDER FOR PLANTING.

13. Avoid buying of unreliable dealers.

Face the fact that there are many unscrupulous agents among those supplying trees, plants and seeds, but also that there is no lack of reliable ones representing reliable nurseries. Notice that the dishonest agent deals in most extraordinary claims for new and wonderful fruits and flowers—it is his trade-mark.

You can rely on the agent who sells over the same territory year after year.

You can trust the agent, stranger though he be, who, representing a first-class nursery, carries a signed certificate of recent date, from the nursery he sells for. Always insist on seeing such certificate before buying.

Swindlers have been known to carry forged certificates; if you have suspicions on this point, write to the nursery, asking if so and so is its trusted agent.

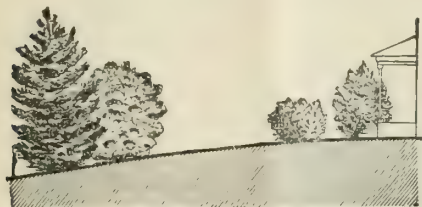
As a rule, buy no seeds of travelers or at drug or grocery stores. Order from the catalogues of reliable dealers.

Avoid buying evergreens of any except the grower or his trusted local agent.

Evergreen trees, if well transplanted, usually take on a mature look at once. Many shrubs, such as hardy hydrangeas, rose of sharon or althea, roses, weigelas, summer and fall spiræas, clematis, usually flower freely the first season if the planting be carefully done.

Invest with extreme caution in all new and untried things. In many cases, the money that is spent for these proves to be an utter waste.

For family use the variety in fruits may be somewhat increased over that which is the most profitable for market. In apples, the inexperienced generally get too many summer and fall varieties, as compared with winter kinds. Better plant a large proportion of winter sorts, in order to secure an abundance of fruit for the seasons when other fresh fruit is absent.



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Fig. 10. Trees arranged for having center of the grass plat agreeably open. See No. 15.



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Fig. 11. The same as Fig. 13. but with center of the grass plat objectionably planted. See No. 15.

14. Suit the kind to the place.

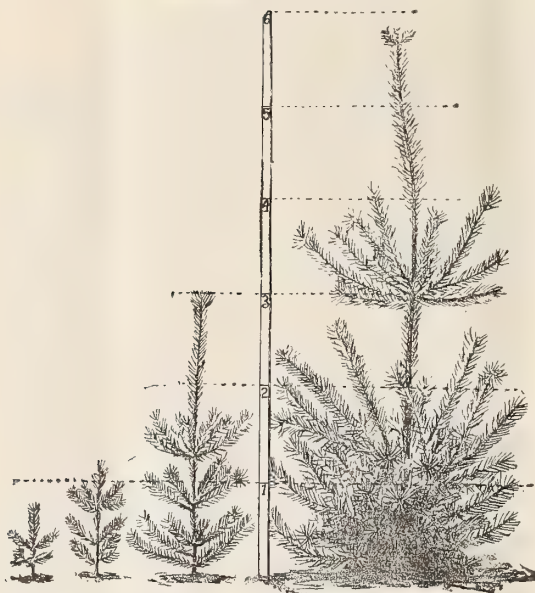
Do not plant apple or large shade-trees in narrow town lots; there are many smaller kind in both fruit and ornamental trees better suited to the place.

Where space is very limited, employ vines such as the grape or ornamental climbers, because they accommodate themselves so perfectly over a perpendicular surface. It is surprising how much can be done in house-side gardening by the use of vines where there would not be enough ground surface for other kinds.

Every planter sets some street trees, but many make mistakes as to kinds, especially in towns where the law (a proper one) requires that the trunks be kept clear for ten feet up. Here one should select according to the style of growth; if the tendency is to branch low with a heavy growth at the bottom, as in Fig. 16 the tree is less suitable than is the reverse form shown in Fig. 17. On this account the American elm is about the ideal shade-tree.

15. When to Plant—Spring or Fall?

A hard question, because no one knows what the season ahead will be like. Summer drouth is harder on spring than on fall planting; extremely cold weather is the reverse of this. In the southern states November to January is the preferred planting season generally. Taking one year along with another one



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Fig. 12 at 3 mo. plant- after ing. plant'g
Fig. 13 at 3 mo. plant- after ing. plant'g
Fig. 14 at 15 mo. plant- after ing. plant'g

Fig. 15. See No. 22. Size in feet of the same white pine 27 months after planting.

we would not recommend general fall planting in localities where the winters are known to be severe. Yet even here there might be little risk in fall planting, if the stone fruits, strawberries, evergreens and ornamental trees, shrubs and plants were not included. These we would prefer to plant in the spring.

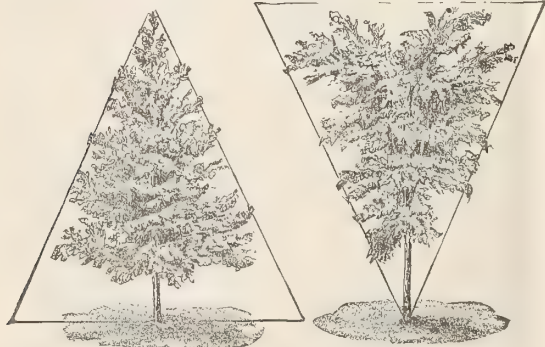
But whether done in the spring or the fall, let the planting be done early in the season, that is, in the spring as soon as possible after the soil will work up loose; in the fall immediately after the first hard frosts.

For evergreens about corn planting time or when soil has become warm and mellow.

THE SOIL IN WHICH TO PLANT.

16. Land well suited to garden crops, or to wheat or corn is suitable for trees and vines and lawns

The soil needs thorough cultivation and enriching for trees no less than to produce a good crop of corn. If the average culture given to the crop named were bestowed on trees, especially for the first years after planting, reports of failure in planting would rarely be heard.



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Fig. 16. The heaviest growth in bottom branches: hence not well suited for street planting, where long trunks are desirable.— See No. 23.

Fig. 17. The heaviest growth at the top, inducing the tree to have a high trunk: hence well suited for street planting. See No. 23.

If the soil where you wish to plant trees is very dry and gravelly or if the top earth is very shallow, or the site is that of an old dead tree, a good thrifty growth can be obtained by making special preparations. These should consist of digging out the sterile earth for a space of say five feet across and two feet deep, and filling in the hole thus made with fresh loam in which to do the planting.

Vines against houses or veranda-posts often fail because the soil here is the hard subsoil dug from the cellar. Under such circumstances, furnish good earth and plenty of it for the plant.

17. The soil should be well drained.

Few kinds of trees or plants, none in the fruit class, succeed in wet land. A soil too wet for raising good winter wheat is too wet for trees. This may be known if the water stands in the furrows for half a week or more after the frost has left the earth in the spring, or after a heavy rain has ceased. Drain such land before planting it to trees.

18. How to heel-in trees and plants.

One way of heeling-in is illustrated in Fig. 18. First a good sized trench is thrown out to one side, and a row of trees is laid down with the roots in the trench. Then a second trench is opened against the first, the soil being thrown over the roots of the trees in the first. Observe four points in heeling-in:



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Fig. 18. Heeling-in Trees. See No. 33.

The same principle is to be observed in heeling-in small plants.

Heeling-in is sometimes done by throwing out the trench on both sides, and then setting the trees upright in the trench, filling in ground from both sides. A second trench if needed, is then opened some six or eight feet from the first, and so on.

Trees received in the fall for spring planting should be heeled-in on some dry spot, free from grass or weeds that would harbor mice, and the root, trunk, and most of the branches be covered with earth. Leave the earth somewhat mound-shaped, to shed water. Then cover any exposed tops with evergreen branches, and the trees, if of hardy kinds, will be safe until spring.

Trees frozen or shriveled in transit should at once be buried, tops and all, in earth, until they are fully restored.

THE OPERATION OF PLANTING.

19. Do we set our plants or trees to live or die?

It is believed that fully two-thirds of all trees planted never become well-developed, productive specimens. Assuming that this is true, what an enormous waste of money, time and hope attends tree-planting! It is an uncalled-for waste. By pursuing right methods the average loss in transplanting need not be so much as one in ten.

Spreading the roots out naturally.

The right idea is shown in Figs. 19 and 22; the wrong one, in which the roots are in masses or are cramped, by Figs 20 and 24. In the absence of a tap-root, the arranging of the roots in planting can best be done by making a small, compact mound of earth in the bottom of the hole over which to spread them. If all these directions are carefully followed, the proportion of trees lost in transplanting may be reduced to the minimum.



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Fig. 19.



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Fig. 20.

20. Carefully surround the separate roots with earth.

A tree in its natural state of growth has each individual root closely surrounded by earth. One cannot be too careful to secure this condition of things when planting the trees. A first requisite is an abundance of fine, good mellow soil; if the planting is being done in sward or by the road-side, suitable soil should be carted from the garden or other convenient point. Then don't trust to throwing in the earth by shovelfuls, and giving a smart shake to the tree, with the notion that this will properly distribute the earth for it will not. Scatter the fine soil carefully over the roots and then with the fingers or with a pointed stick or the feet work it under and around every part. Fig 20 is a good illustration of "shovel planting," in which no pains are taken to separate the roots. Figs 19 and 22 are good examples of right planting in this regard.

Use no manure against the roots, although if some that is old and fine be at hand, it may be scattered over the earth before all has been returned to the hole. A moderate top dressing of old manure is never out of order.

21. Firm the soil compactly.

No part of planting or seed-sowing is of higher importance. In nature we find the soil laid so tightly against every part of the roots, that should a strong man attempt to pull up a main root of a small tree he would be likely to fail. Imitate the natural condition as near as you can. Tread the earth firm with feet. But the roots should be shielded by some earth as this part of the work progresses.

Very firm planting is the only safe course in setting out evergreen trees.

Set seedling plants from a seed-bed so firmly with a dibble that they will not draw out if pulled by a leaf—the latter tearing instead.

With seeds it is much the same. To sprout they must first and continuously absorb moisture from the earth to cause them to swell. This can be far more certainly accomplished if the seeds are moderately compacted in soil, which yet contains sufficient looseness to prevent rapid drying out.

22. Do not plant trees in a puddle, or when the earth is wet.

Because moisture is necessary to root and seed growth, do not fall into the grave error of thinking that excessive wetness would be yet better. What roots and seeds require is not direct continuous wetness (which really is injurious), but moisture in the shape of vapor, obtained by the mingling of air and water in the soil. The plan of pouring a large quantity of water into the tree hole when it has been half filled with earth is not a good one, unless the surrounding earth is quite dry, so that it will quickly absorb the excess. If the soil is at all moist, it is seldom best to use any water in planting.

23. On leaning the tree.

It is a good rule to lean trees slightly in the direction of prevailing winds, the action of which in time will bring them to a perpendicular position. In sections where tree-trunks are liable to injury from sun scald, as throughout the north-western states, it is well to lean the tree a little to the south in order that the top may shield the trunk from the sun's rays.

24. Better to till your trees and plants than to water them.

This refers to all trees in orchards, borders, etc., and to garden crops. By keeping the soil stirred to a depth of an inch or so, the lower stratum will retain

a remarkable degree of moisture, even in dryest weather. This because, first, the broken surface prevents largely the escape of moisture upwards by capillary attraction; second, a well tilled soil absorbs moisture from the air, especially at night.

It must not be forgotten that weeds are enormous absorbers of moisture; what they take, the crop must go without.



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Fig. 21.



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Fig. 22. Rightly planted
with all the roots properly
spread out. See No. 40

25. Good tillage is as good as mulching.

The layer of loose surface soil may well be termed a mulch. It preserves moisture nearly as well as a foreign mulch like straw, sawdust, etc., it better admits the air to the roots; it encourages deeper root growth; it is more convenient in a garden; and it does not provide a congenial harbor or propagating place for injurious molds, insects, and quadrupeds, as a mulch may do.

26. In times of drouth, water profusely, if at all.

As a rule, if more culture and less water were given in American gardens the results would be better. Yet there are instances where watering during drouth is desirable, such as trees and shrubs growing in sod; vines against buildings; strawberry beds; beds closely occupied with flowers, celery, etc.

To water any of these properly, the soil should be deeply punctured with a bar of iron to admit the moisture well down to the roots. Then enough water should be applied to saturate thoroughly the soil. Such a watering should suffice for weeks, perhaps for the season. See fig. 23.

Never indulge in the common practice of applying a dribble of water to each tree or plant daily, only to cause the surface of the soil to bake, without ever giving enough to soak completely down to the roots.

27. Stir the soil each time after being wet from rain or otherwise.

This is to prevent baking of the surface, which would cause loss of moisture in consequence of the unbroken capillary action between lower stratum and surface. Mellowing and pulverizing the surface checks this. Clean and thorough cultivation is the first choice in any event. If ever an annual crop is grown between young growths, as is permissible and perhaps advisable in newly planted orchards, etc., it should be one which needs cultivation and hoeing, like beans, corn, potatoes, etc.; but a grain or clover crop should not be sown in such a place, since the young growths will then miss needful stirring of the soil.

AFTER THE PLANTING.

28. Keep the surface over the roots of trees, vines, etc., cleanly tilled all season.

This is a rule that should be laid down for all kinds of trees, plants, etc. You would not expect a good potato crop from untilled land, choked with weeds and grass. Neither must trees, shrubs or other plants be expected to thrive with slighted culture. For three years at least treat all growths as well as you would potatoes, and orchard trees had better be so treated perpetually.

Even young trees, shrubs, etc., on the lawn should have the soil tilled for some years. By planting in groups, as advised under No. 11 it is easy to treat the surface of the soil between and just about the trees, shrubs, etc., as an open border neatly cut in the sward, and then keep cleanly tilled. Single specimens may have a circle from two to five feet across, they standing in the center kept similarly tilled.

Figs. 12 to 15 show some instances of rapid growth on the author's grounds, where attention has been given to clean culture and moderate fertility.



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Fig. 23.

All crops from seed, and all bedding and garden plants should be kept scrupulously clean of weeds. By beginning early in the season, when the plants are small and tender and passing over the beds with light tools every week or two during the season, it is easier to keep a place clean than half clean.



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Fig. 24. Planted with
roots all in a mass.

TESTIMONIALS.

Read what a few of my last year's customers say about my trees and mode of packing. I have never asked any one for a testimonial. All of the following are entirely voluntary and unsolicited; they are from persons most of whom are entire strangers to me.

Evergreens are received and are very much pleased with them.

Trees received in fine condition, and are satisfactory. JOHN R. WHEELER, Harnforth, Ia.

Plants came in good order.

Evergreens received on the 9th, in very fine condition. I have bought for three years of you, and they have always given satisfaction. H. B. PERRY, Arlington Heights, Ill. J. R. McCANN, DeWitt, Nebr. C. E. MAGEIS, Sabetha, Kas.

Trees received all right. Will want more another season.

The trees received, were all fine, and gave good satisfaction. ALBERT T. ALLISON, Arlington Heights, Ill. All I could ask.

Received the evergreens you sent me, in fine condition. A. B. HACKMAN, Penrose, Ill. E. B. RICE, Platteville, Wis. D. S. DEAVORS, Allerton, Ill.

Evergreens received by express. Thanks for promptness. They are very nice trees. D. W. EVANS, Harlem Ill.

I received evergreens all right, and in good condition. JOHN CRISP, Stecoah, N. C. The stock was fine. L. A. BELTZER, Osceola, Neb.

Your trees arrived all right, and are satisfactory to me. J. BROCKMAN, Wolcott, Ia. I am well pleased with size and shape of trees, which reached me in very good condition. Thanks for extras. JOSEPH WIDMER, Highland, Ill.

Received the trees in splendid condition and satisfactory. ALVIN DICKSON, Bentonville, Ark.

The order of trees sent me this spring, were perfectly satisfactory. J. Y. CRAIG, Omaha, Nebr.

We are well pleased with evergreens bought of you. SEDGWICK NUR. Sedgwick, Kas. The trees arrived all O. K. and in good shape. JOHN HILL, St. James, Minn.

The trees arrived, and all were in fine condition. ALMA CARPENTER, Westfield, Wis. The shipment of evergreens arrived in good condition.

We were greatly pleased with the evergreens. They far exceeded any expectation. They are decidedly the finest seedling evergreens we have received from any one. O. L. MELGAARD, Argyle, Minn.

Evergreens received yesterday in good condition. I think your evergreens will sell fast hereafter. JAMES D. TAYLOR, Guthrie Center, Ia.

Thanks for sending such nice trees, which arrived in good shape. OLE TANNING, Taopi, Minn.

Stock came all correct. P. H. LEONARD, Lawler, Iowa.

The Spruce received in fine condition. Thanks for the extras. JESSE AKIN, Calliope, Iowa.

The trees were excellent in quality, and the packing was well done. C. L. WATROUS, Des Moines, Ia.

Accept thanks for the evergreens, which were received in good condition. DR. DENKE WALTER, Spencer Ind.

The box of plants reached us to-day, and are very satisfactory. D. E. EVANS, South Bend, Minn.

Box of trees arrived all in good shape. F. A. FISSEL & BRO, New Carlisle O.

The trees received are a fine lot, and in good shape. GEO. P. PEPPER, Pewaukee, Wis.

My orders for trees to you, are all received in good condition. ERWIN PORTER, Glidden, Ia.

Evergreens sent were satisfactory. OSCAR THOMPSON, Rolands, Ia.

Trees arrived in good order and they give satisfaction. Can sell a good many next season. A. WALL, DeGraff, Minn.

I found the evergreens as represented. GEO. F. KEEFER, Alvo, Nebr.

The Spruces arrived yesterday in good condition. J. R. McLAURY, Wyman, Ia.

The large box of trees are all right, and are beauties. L. E. BARTLETT, Elburn, Ill.

Evergreens at hand all right. They are all I could ask for; I am well pleased with them. A. F. WALTER, Odebolt, Iowa.

Received evergreens Apr. 23, in good condition. Thanks for such fine trees. W. E. WORMETH, Pine Grove, Mich.

The stock was received all O. K. It is all very fine. JASPER BROWN, Norway, Iowa.

The shipment of trees from your nursery came to hand April 21st. Am well pleased with them. B. J. WAKEMAN, Chebanse, Ill.

Stock arrived yesterday all O. K. JOHN SCHROEDER, Ossian, Iowa.

Trees arrived in good shape. V. W. GOODRICH, Seward, Nebr.

Evergreens arrived in due time, and in fine condition. You will hear from me another season. ALBERT A. LEVERTON, Abbott, Ia.

I received the trees in good condition, which is all satisfactory. A. M. DULLER, Iowa Falls, Iowa.

Stock arrived O. K. W. J. LARABEE, Marshall, Minn.

Evergreens received this evening, in good shape. ANTON WERBER, Shucyville, Iowa.

The bill of evergreens came to hand all right. R. B. CULBERTSON, Central City, Ky. O. S. TRASK, Axtell Kas.

The box of evergreens received. They are very nice trees. Mrs. E. F. BOLEN, Sweetser, Ind.

Trees came in very fine condition, and are very fine. ROBT. GREGG, Joff. City, Mo.

- The trees received, are a fine lot, and give perfect satisfaction.
 Evergreens arrived; they are fine.
 The trees came in good condition, and in good time. They are nice plants.
 My stock arrived in good order. Thanks for promptness
 The shipment of evergreens arrived in good condition.
 The box of trees came to-day, in good condition.
 The Scotch pine came in good shape
 The Arbor Vitae came yesterday in good shape. Am more than pleased with them.
 It is a pleasure to deal with a firm that will send nicer trees than I expected.
 Evergreens all right.
 The Scotch Pine came all right and are in apparent good growing condition, but came by express instead of freight.
 Accept thanks for sending such nice trees, which came all right.
 Evergreens arrived in good shape.
 I am pleased with the stock I got of you.
 The shipment of trees you sent are much finer than I expected.
 I received the bill of evergreens you shipped to me in good shape
 Trees arrived in good order, and are all satisfactory.
 Evergreens received the 4th in good order. Sorry I did not commence to sell for you two months sooner.
 I am glad to say the trees reached me in good condition, and were more than I expected in quality, so much so that I could have sold half I purchased. You will hear from me again.
 I received the trees May 5th, in good order, and I am well pleased with them.
 I am pleased with the trees you sent.
 Arbor Vitae reached me in good condition, and I found them uniform in size and well rooted. I am well pleased with them.
 Trees all received in good condition and give general satisfaction. Thanks for the extras you sent.
 The six boxes of evergreens were received in due time, and good stock, and well packed
 We were well pleased with the trees sent us, which came in nice shape. We thank you very much for your honorable dealing with us.
 The stock was received and gives satisfaction.
 I received the trees all O. K. and the patrons are highly pleased with them.
 The trees arrived yesterday. Every one says they are the finest lot of trees that ever came to this state.
 Trees arrived and opened in good shape.
 Trees arrived in due time and in very good order. I am very much pleased with them.
 I am well satisfied with the evergreens you shipped me. Will send you more orders next year.
 The trees are received and they are good ones.
 Evergreens came through by freight and gave entire satisfaction.
 The Norway Spruce you shipped us are a very fine lot.
 The box of trees was received all O. K. Were ten days on the road, but were fresh and nice. Every one who saw them at the station declared them to be beauties.
 Trees received and planted. They are doing fine.
 Our trees were received in good condition and we are well satisfied. Words cannot express our thankfulness to you for your generosity.
 The trees received to-day. I was much pleased to get such good stock.
 Trees came all right, are set out and look very nice.
 Our evergreens came to hand in nice order to-day. They are set out and doing nicely.
 Trees reached us in the best of condition. Shall want more another year.
 Evergreens arrived in apparent good condition.
 Nursery stock arrived; all right and satisfactory.
 Evergreens shipped by express arrived in good condition.
 I wish to thank you for the fine trees you sent; they are very fine.
 I have received my evergreens in good order.
 The pines were received in due time and in good condition. Have planted them out and all are growing.
 I am well satisfied with the evergreens sent me; they were delayed on the road but were received in good condition.
 The box of evergreens arrived in a most excellent condition.
 The stock was nice. I am well satisfied.
 I am more than pleased with the stock. You will hear from me again.

C. E. MITCHELL, Fairview, Ill.

JAMES SHERIDAN, Fort Wayne, Ind.

J. BLACKNELL & SON, Titusville, N. J.

JOHN A. HANSCHEN, Akdine Ind.

Thanks for the nice trees.

J. J. VOYEK, Spillville, Iowa.

JNO. F. SNEED, Tyler, Texas.

W. A. EARLY, Rock Falls, Ill.

JOHN M. OTT, Syracuse, Ind.

AMELIA L. MORRISON, Kellerton, Iowa.

C. LICHTENWOLTE, Hubbell, Nebr.

CYPRIUS BURR, David City, Nebr.

JOHN SAFELY, Cushing, Iowa.

J. H. MALLARY, Odell, Ill.

L. W. SERIGHT, Fruitland, Iowa.

J. W. STRASE, Columbus City, Iowa.

THOS. KEDDIE, Huntville, Ks.

J. O. JOHNSON, Pocatello, Idaho.

A. ROBERTS, M. D., Attica, Ind.

W. D. RAWLING, Corning, Cal.

W. E. FULLER, Hassan Iowa.

J. M. LEACH, Elkader, Iowa.

A. B. ANDERSON, West Liberty, Iowa.

J. B. CRIPPS, Albion, Iowa.

HIRAM WHITWOOD, Secor, Iowa.

GEO. GORTON, Jessup, Iowa.

H. W. HERREN, Lincoln, Kas.

OTTO HAACK, Redwood Falls, Minn.

WM. KING, Mt Ayr, Iowa.

Mrs. JOHN CAMPBELL, Ypsilanti, Mich.

W. P. KINGSLEY, Laurens, Iowa.

T. C. GABLE, Plattville, Ill.

JORN L. CARNES, Worcester, Mo.

JAS. KENS, Argyle, Wis.

PETER BRUGGER, Crandon, S. Dak.

A. C. MUTZ, Auburn Nebr.

PHILLIP COSBEN, Randall, O.

H. F. RATHE, Proviso, Ill.

JEROME RUTTS, Woodstock, Minn.

Mrs. M. J. STUNBOUGH, Miles, Ia.

W. F. BAKER, Tarkio, Ms.

W. H. WILLIAMSON, Blissfield, O.

ANDREW VOLLO, LeRoy, Minn.

FRANK HOSKINS, Henning, Minn.

G. A. FELCH, Wilder, Minn.

F. R. SIMONS, Woganport, N. Dak.

S. L. MORRISON, Chariton, Iowa.

L. RIERSON, Blooming Prairie, Minn.

Mrs. H. ROUSH, Troy, Iowa.

W. W. BAKER, Tallula, Ill.

C. LOOK, Lena, Ill.

Evergreens received in good shape and seem to be very nice.

The white pines received in good shape. Accept thanks for your liberality.

We have received the trees and are very well satisfied with them.

Seedlings were received to-day. Plants better than expected, receive my thanks.

Trees arrived Monday morning, fresh and nice. Thanks for liberal count.

Trees very nice and fine, but very high.

My trees came to hand in good order.

I am well pleased with the evergreens received. They are just beauties.

Evergreens were all O. K. and in good shape but a little late.

Trees came all right. Customers more than satisfied. Am much pleased with your method of packing; such a fine lot of trees has never been received at this point.

The evergreens bought of you came in nice condition, and I was well pleased with the stock. Thanks for promptness.

Trees came sometime ago in good condition and all growing now.

Evergreens came all right. Thanks for the extra ones.

I delivered the trees I received from your nursery to-day, and they gave splendid satisfaction.

Evergreens came in fine order. Am well pleased with them.

Stock received in first-class shape and is all doing nicely.

The evergreens were nice and received in fine shape.

Trees came to hand all right and in good shape.

Stock reached us in good condition.

I received my order you sent me; did not expect to get such nice trees.

You sent me splendid stock, and it reached me in good shape.

The evergreens you sent me were delayed on the road, but I found the roots well preserved in moss, so they seemed to be in good condition.

The trees were delayed one week, but appeared to be in good condition.

Trees received. Am well pleased with them, Shall order more next year.

My evergreens arrived in good condition.

It is with thanks that I notify you that the shipment of evergreens arrived safely, and are doing well.

I feel that I am under obligation to you for the care you took in packing my shipment of evergreens. I never saw trees packed any better than these were. I shall have more orders for next spring.

The box of trees arrived in good order, and I am pleased with them.

The Arbor Vitae reached us in nice shape; I think the reason lies in the care that was given them in packing. Accept thanks for extras.

The evergreens you sent me last year have done fairly well, considering the long journey.

My evergreens arrived in good order, and I am well pleased with my trial order.

The evergreens came Saturday and were in good shape.

Evergreens came in good shape.

Trees arrived last night. They were delayed on the road, but I am well pleased with them.

Trees came to hand Saturday in very nice condition, and everybody satisfied.

I received the trees Monday, all in good order, and I am very much pleased with them.

Evergreens arrived here in very nice condition.

Norway Spruce came to hand in fine condition.

The stock I received from your nursery was very good.

I am well satisfied with my trees, excepting the Balsam firs, which are a little small.

We were well satisfied with our trees received from you.

The evergreens came in excellent condition, and were in size as you represented them to be. Contrary to what we usually find, your count was good, even giving extra numbers. We will certainly remember you as one of the reliable ones in the nursery business.

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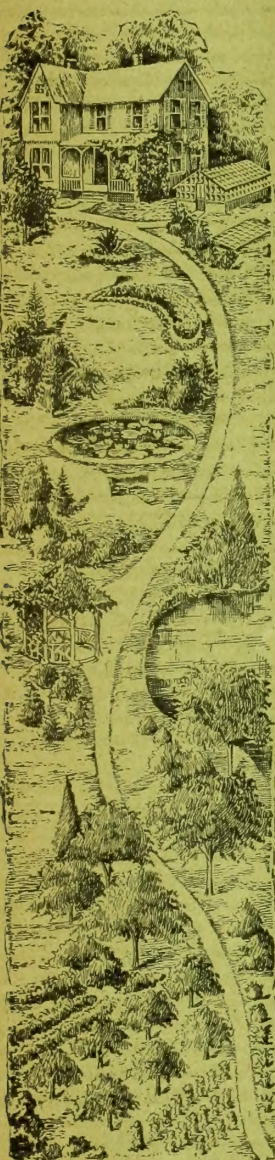
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